

Section 4.27 Watershed Protection

Draft August 2021

Purpose:

1. The purpose of this ordinance is to protect the quality of water resources within the watersheds in Cleveland Township and to ensure that the structures and uses in the township are compatible with and protect these unique resources. Other specific purposes include:
 - a) The prevention of water pollution and water quality degradation.
 - b) The conservation of natural shoreland areas.
 - c) Conservation of watershed hydrology by managing stormwater to protect the natural hydrologic regime, especially as it relates to the quantity of runoff versus infiltration and groundwater recharge.
 - d) Protection against the negative impacts of nutrient loading, erosion, and stormwater runoff.
2. The protection of our watersheds is deemed a high priority by Cleveland Township residents, as reflected in the Master Plan (adopted 10/2017). Watershed protection is an important public purpose to protect public health and welfare and to conserve natural beauty and the environmental, historical, recreational, cultural, scenic and economic attributes of the watersheds and region.
3. Ordinance Section 4.27 applies to all property bordering Water as defined in Section 3.80.
4. All other requirements shall be as required by the underlying zoning district, except that where specific requirements of the Watershed Protection vary or conflict with the regulations contained in the underlying zoning district, the stricter shall govern.

Definitions:

1. Hardened Seawall: A stationary, permanent seawall composed of non-permeable, hard material.
2. Lot Coverage: The part or percent of a lot occupied by impervious surfaces, including, but not limited to, buildings or structures, paving, drives, patios, and decks.
3. Low Impact Development (LID): Stormwater management practices that promote the infiltration of rainwater and recharge of groundwater (as opposed to the conveyance of stormwater off-site). The purpose of LID is to mimic a site's pre-development hydrology by using design techniques to retain runoff close to its source. LID may include any of the following: bio-retention basins (i.e., rain gardens), infiltration trenches, porous pavement, grassed swales, perforated pipe, dry wells, rain barrels, and cisterns or other technologies or practices that reduce runoff.
4. Natural Vegetative Cover: Natural vegetation, including native species of bushes, shrubs, groundcover, and trees on a lot. Lawn shall not qualify as natural vegetative cover.
5. Shoreline: The water's edge as defined in Section 3.81 of water Section 3.80.
6. Shoreline Vegetative Buffer: The land area inland from the shoreline maintained in natural or planted vegetation, excluding lawns.
7. Impervious surface: Impervious surface means an area that prevents or impedes the infiltration of the precipitation that falls on it, except for frozen soil. Rooftops, sidewalks, driveways, parking lots and streets are examples of areas that typically are impervious.
8. Permeable: Permeable means any surface or material that allows the passage of water through the material and into the underlying soil.

Shoreline Vegetative Buffer:

1. Intent: The purpose of the shoreline vegetative buffer is to protect the lakes and streams of the Township by preserving natural shoreline vegetative cover and habitat, preventing soil erosion, and providing a filter for the removal of pesticides, fertilizers, and other potential water pollutants.

2. A shoreline vegetative buffer bordering water, as defined in Section 3.80 of the Township Zoning Ordinance, shall be maintained. Mowed lawn shall not qualify as natural vegetative buffer under this section. The minimum width/depth of the buffer, as measured from the shoreline inland, shall be 30 feet.
3. Within the shoreline vegetative buffer, no more than an aggregate of 20 percent of the shoreline may be cleared, provided that the clearing does not cause erosion or sedimentation. Vegetation may be removed for a single view corridor, or selective vegetation removed to provide for a filtered view throughout the shoreline, provided the cumulative total of vegetation removed does not exceed 20 percent of the shoreline.
4. Selective trimming of tree branches to allow for filtered views is permitted within the shoreline vegetative buffer.
5. The use of pesticides, herbicides, and fertilizers within the shoreline vegetative buffer is prohibited.
6. Limited clearing of the vegetative buffer is allowed when required for construction of a permitted structure outside the vegetative buffer, provided that the land cleared is returned to a vegetative state of the same quality that existed prior to clearing and is equally effective in retarding runoff, preventing erosion, and preserving natural beauty, and the functionality of the vegetative buffer.
7. These provisions shall not apply to the removal of invasive, exotic, noxious, dead, diseased, or dying vegetation or trees that are in danger of falling, causing damage to dwellings or other structures. Property must be revegetated with native midwest vegetation.
8. The shoreline vegetative buffer shall not be used for any motorized vehicular traffic, parking, or for storage of junk, waste, or garbage, or for any other use not otherwise authorized by this Ordinance.

Hardened Seawalls:

1. Intent: To prevent or limit the construction of seawalls that cause erosion, wave deflection, increased turbidity, and prevent the natural migration of aquatic life into and out of the water.
2. Hardened seawalls are prohibited.

Fertilizer Use:

1. Intent: To limit the use of phosphorus-laden lawn fertilizers that accelerate lake eutrophication.
2. Consistent with state law, lawn fertilizer containing phosphorus shall not be applied unless a new lawn is being established or a soil test documents a phosphorus deficiency. Agricultural fertilizer applications are exempt from this requirement.

Lot Coverage and Natural Vegetative Cover:

1. Intent: To minimize impervious surfaces and runoff and promote the natural infiltration and recharge of groundwater in the watersheds.
2. For all development bordering Water (defined in Section 3.80 Township Zoning Ordinances), excluding business, commercial resort, and agriculture zoned properties, the following Lot Coverage and Natural Vegetative Cover provisions shall apply:
 - a) Lot Coverage: The maximum lot coverage shall not exceed 25% of the entire lot area. The use of pervious pavement for driveways and patios is encouraged and may be excluded from the calculation of lot coverage.
 - b) Natural Vegetative Cover: Lots shall maintain a minimum of thirty percent (30%) of the entire lot area in natural vegetative cover. To the extent practical, natural vegetative cover shall be maintained along lot lines, natural drainage courses, and wetlands. Shoreline Vegetative Buffer required by this Ordinance may be included as part of the Natural Vegetative Cover.
 - c) In the case of planned unit developments, site condominiums, and open space developments, each individual lot need not meet the requirements of this Section, provided that the total project or an individual phase of a project meets the requirements of this Section.

Stormwater Management:

1. Intent: This provision is intended to preserve natural drainage systems to encourage infiltration and to minimize the need to construct enclosed, below-grade storm drain systems; to preserve natural infiltration and the recharge of groundwater and to maintain subsurface flows which replenish lakes, streams, and wetlands and maintain water quality; and to ensure that soil erosion, sediment, and stormwater runoff control systems are incorporated into site planning at an early stage in the planning and design process.
2. As of the effective date of this Ordinance, stormwater shall be managed in accordance with low impact development (LID) design principles that promote the infiltration of rainwater and recharge of groundwater (as opposed to the conveyance of stormwater off-site). Where feasible, steps shall be taken to retain and infiltrate stormwater on-site via LID practices. All lots shall retain stormwater runoff on-site or detain it so as to allow discharge without any impact on adjacent lands, streams or water bodies beyond the existing predevelopment runoff impact.
3. Lands within Cleveland Township Watersheds are deemed environmentally sensitive areas having a high potential for environmental degradation as a result of soil erosion and stormwater runoff and are thus subject to the standards contained within Leelanau County's Soil Erosion, Sedimentation and Stormwater Runoff Control Ordinance. On all lands within the watersheds, a land use or building permit shall not be granted until a permit or waiver has been issued by the Leelanau County Enforcing Agency (i.e., the Leelanau Conservation District) in accordance with the Leelanau County Soil Erosion, Sedimentation and Stormwater Runoff Control Ordinance.

General Design and Development Standards:

1. Intent: The general design and development standards are intended to minimize the impact of development on the land and water resources of the watersheds.
2. Natural vegetation shall be maintained wherever possible.
3. Existing mature trees shall be maintained on site where feasible. The developer must demonstrate how trees will be protected during construction.
4. To the extent feasible, natural drainage areas shall be protected from grading activity. Where possible, existing natural runoff control features such as swales, berms, and shallow depressions shall be retained to help reduce runoff and to encourage infiltration of stormwater.
5. Grading shall be conducted to minimize undue compaction of site soils.
6. Buildings and structures shall be clustered as much as possible to retain open space and surrounding tree cover, and to minimize changes in topography.
7. Clearing of land is prohibited without appropriate approval and mitigation plan from the Township except when land is cleared and cultivated for an agricultural, forestry, or garden use in a district permitting such use.
8. The smallest practical area may be exposed at any one-time during development. When land is exposed during development, the exposure shall be kept to the shortest practical period of time.
9. Where feasible, private roads and driveways shall be located along natural contours in order to minimize cutting and filling and the potential for erosion.
10. Appropriate measures shall be taken to prevent adverse impacts to neighboring properties or the quality of area water resources from stormwater drainage.
11. Low Impact Development (LID) shall be used where practical and, to the extent feasible, stormwater shall be retained on-site.

APPROVALS:

1. Intent: To provide a process that requires all development bordering water (as defined in section 3.80) to be reviewed to ensure full compliance with requirements of this ordinance.
2. For development requiring a site plan in accordance with Cleveland Township Zoning Ordinances, site plan approval shall be obtained prior to development. For parcels subject to the Township's site plan review standards, site plans shall include all information required for site plan review as well as the following:
 - a) Existing natural features such as mature trees, wetlands, steep slopes, soil types, drainage and water features, and a narrative description of how natural areas will be preserved.

- b) The ordinary high-water mark and proposed shoreline vegetative buffer (if applicable).
 - c) The placement of proposed structures; grading limits; areas where vegetation is proposed to be cleared.
 - d) A calculation of the percent Lot Cover and percent Natural Vegetative Cover.
 - e) Existing structures on the subject property.
 - f) Low impact development stormwater management controls proposed to be used on the site.
3. For development not subject to site plan review, a plot plan drawn to scale meeting the requirements of 2 above must be submitted to the Township's zoning administrator for administrative review and approval prior to the issuance of a building permit.
4. Development within the Watershed Overlay District must conform with all applicable County, State, Federal, and Township statutes and ordinances including, but not limited to, the Leelanau County Soil Erosion, Sedimentation and Stormwater Runoff Control Ordinance, Part 301 (Inland Lakes and Streams) of the Natural Resources and Environmental Protection Act and, septic and well approvals from the Benzie-Leelanau District Health Department.